

FIG. 1 PRIOR ART

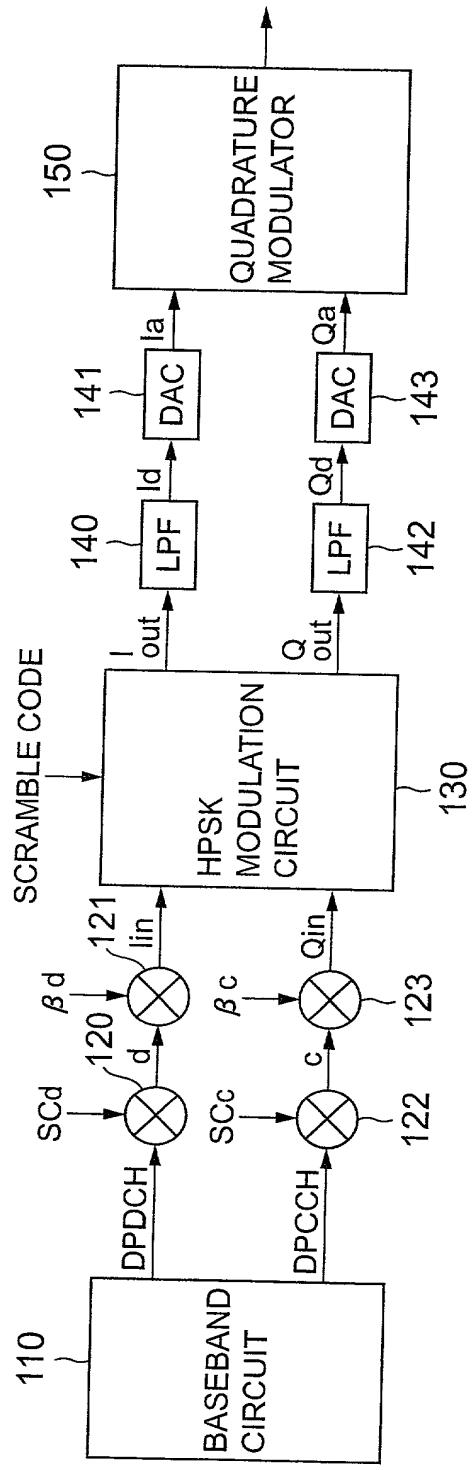


FIG.2

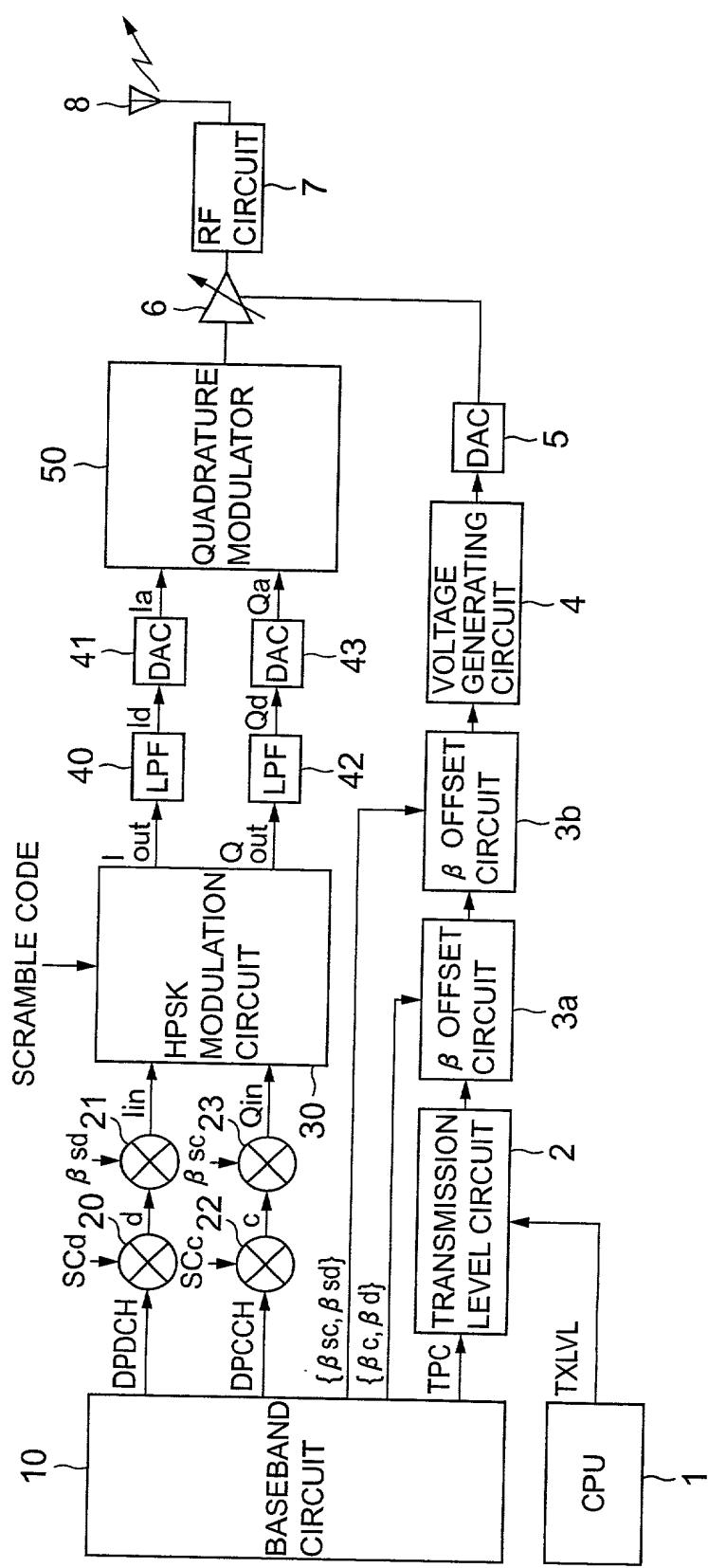


FIG.3

| LOGIC VALUE | | SET VALUE | |
|-------------|-----------|------------|------------|
| βc | βd | βsc | βsd |
| 15 | 15 | 15 | 15 |
| 15 | 14 | 15.5 | 14.6 |
| 15 | 13 | 16.0 | 13.9 |
| 15 | 12 | 16.6 | 13.3 |
| 15 | 11 | 17.1 | 12.5 |
| 15 | 10 | 17.7 | 11.8 |
| 15 | 9 | 18.2 | 10.9 |
| 15 | 8 | 18.7 | 10.0 |
| 15 | 7 | 19.2 | 9.0 |
| 15 | 6 | 19.7 | 7.9 |
| 15 | 5 | 20.1 | 6.7 |
| 15 | 4 | 20.5 | 5.5 |
| 15 | 3 | 20.8 | 4.2 |
| 15 | 2 | 21.0 | 2.8 |
| 15 | 1 | 21.2 | 1.4 |

FIG.4

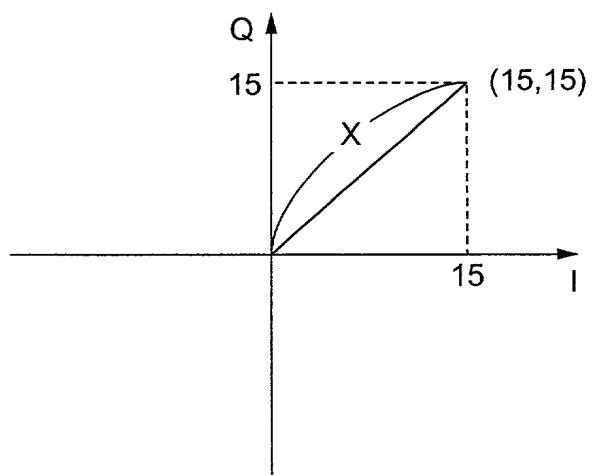


FIG. 5

| β_c | LOGIC VALUE | | | SET VALUE (4-BIT EXPRESSION) | | | $\beta_{sc4^2} + \beta_{sd4^2}$ | DIFFERENCE [dB] |
|-----------|-------------|--------------|--------------|---------------------------------|---------------|----|---------------------------------|--------------------|
| | β_d | β_{sc} | β_{sd} | β_{sc4} | β_{sd4} | | | |
| 15 | 15 | 15 | 15 | 11 | 11 | 11 | 242 | 0 |
| 15 | 14 | 15.5 | 14.6 | 11 | 10 | 10 | 221 | -0.39423 |
| 15 | 13 | 16.0 | 13.9 | 11 | 10 | 10 | 221 | -0.39423 |
| 15 | 12 | 16.6 | 13.3 | 12 | 10 | 10 | 244 | -0.035745 |
| 15 | 11 | 17.1 | 12.5 | 12 | 9 | 9 | 225 | -0.31633 |
| 15 | 10 | 17.7 | 11.8 | 13 | 8 | 8 | 233 | -0.16459 |
| 15 | 9 | 18.2 | 10.9 | 13 | 8 | 8 | 233 | -0.16459 |
| 15 | 8 | 18.7 | 10.0 | 13 | 7 | 7 | 218 | -0.45359 |
| 15 | 7 | 19.2 | 9.0 | 14 | 6 | 6 | 232 | -0.18327 |
| 15 | 6 | 19.7 | 7.9 | 14 | 6 | 6 | 232 | -0.18327 |
| 15 | 5 | 20.1 | 6.7 | 14 | 5 | 5 | 221 | -0.39423 |
| 15 | 4 | 20.5 | 5.5 | 15 | 4 | 4 | 241 | -0.01798 |
| 15 | 3 | 20.8 | 4.2 | 15 | 3 | 3 | 234 | -0.146 |
| 15 | 2 | 21.0 | 2.8 | 15 | 2 | 2 | 229 | -0.2398 |
| 15 | 1 | 21.2 | 1.4 | 15 | 1 | 1 | 226 | -0.29701 |

FIG.6A

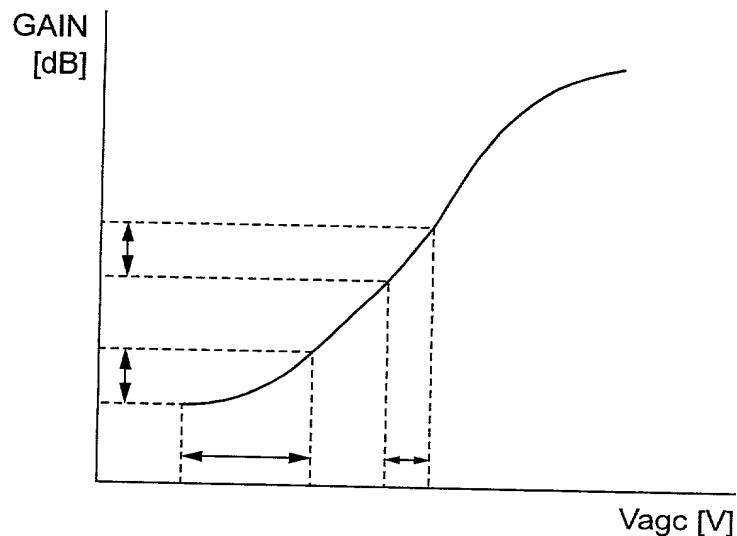
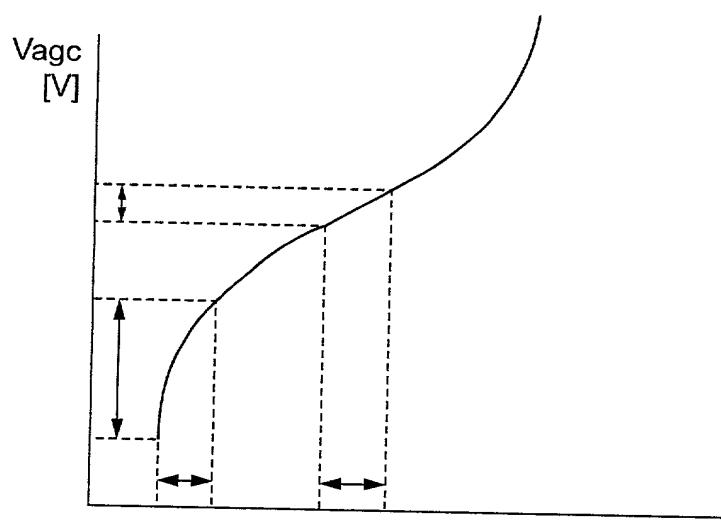


FIG.6B



AGC AMP. CONTROL CODE

FIG. 7

